ELSEVIER

Biosystems 40 (1997) 287–288

Bio Systems

Volume contents

Volume 40 (1997)

Introduction
P. Lansky (Czech Republic) 1
Information coding on the basis of synchronization of neuronal activity
R.M. Borisyuk, G.N. Borisyuk (Russia) 3–10
Biologically plausible neural computation
G. Bugmann (UK) 11–19
Dynamics of the neural discharge in snail neurons
S. Chillemi, M. Barbi, A. Di Garbo (Italy) 21–28
A stochastic model for interconnected neurons
M. Cottrell, F. Piat, J.-P. Rospars (France) 29–35
First passage statistics of periodically driven models for neural dynamics
T.C. Elston, A.R. Bulsara (USA) 37–43
Rhythmogenesis in single cells and population models: olfactory bulb and hippocampus
P. Érdi, I. Aradi, T. Grőbler (Hungary) 45–53
Coding properties of peak and average response rates in American cockroach olfactory sensory cells
W.M. Getz, R.P. Akers (USA) 55–63
Single neuron's activity: on certain problems of modeling and interpretation
V. Giorno, A.G. Nobile, L.M. Ricciardi (Italy) 65–74
Jump-diffusion processes as models for neuronal activity
M.T. Giraudo, L. Sacerdote (Italy) 75–82
Reinforcement learning in random neural networks for cascaded decisions
U. Halici (Turkey) 83–91
A self organizing map approach to image quality
G. Hauske (Germany) 93–102
Modeling of the response of midbrain auditory neurons in the rat to their vocalization sounds based on FM sensitivities
M.C. Kao, P.W.F. Poon, X. Sun (Taiwan, Hong Kong) 103–109
Spike train patterning and forecastability
A. Longtin, D.M. Racicot (Canada) 111–118
Dynamics of analog-to-frequency transduction in sensory receptors
M. Menzinger, A. Rovinsky, S. Chillemi (Canada, Italy) 119–126
Possible roles of retrograde messengers on LTP, LTD, and associative memory
M. Migliore, F. Alicata, G.F. Ayala (Italy) 127–132

Single neuron model with recurrent excitation: response to slow periodic modulation
K. Pakdaman, F. Alvarez, O. Diez-Martínez, J.-F. Vibert (France, Uruguay, Mexico) . . 133–140
A one step motion detection circuitry
R. Pallbo (Lund, Sweden) 141–148
Neuronal codes: reading them and learning how their structure influences network organization
B.J. Richmond, T.J. Gawne, G.-X. Jin (USA) 149–157
A mathematical model of neural information processing at the cellular level
A.V. Rossokhin, L.E. Tsitolovsky (Russia, Israel) 159–167
On the behavior of mRIC — a simple model of living pacemakers driven by periodic pulse trains
S. Sato, T. Nomura, S. Doi, T. Yamanobe (Japan) 169–176
Complex responses of living neurons to pacemaker inhibition: a comparison of dynamical models
M. Stiber, K. Pakdaman, J.-F. Vibert, E. Boussard, J.P. Segundo, T. Nomura, S. Sato, S. Doi (Hong Kong, France, USA, Uruguay, Japan) 177–188
On the perceptual structure of face space
A. Treves (Italy) . . . . . 189–196)
Stochastic dynamics of a neural network with inhibitory and excitatory connections
T. Turova (USA) 197–202
Coding of odour intensity in a sensory neuron
A. Vermeulen, P. Lánsky, H. Tuckwell, J.-P. Rospars (France, Czech Republic, Australia) 203–210
XNBC: a simulation tool. Application to the study of neural coding using hybrid networks
J.-F. Vibert, K. Pakdaman, E. Boussard, E. Av-Ron (France) 211–218

Density effects in population growth: an exploration
M.A. Fishman (Israel) 219–236
Developmental selection and self-organization
S.A. Frank (USA) 237–243
The organisations of hereditary information
R. Paton (UK) 245–255
Transmission of acquired adjustments to salinity in *Sorghum bicolor*
H. Seligmann (Israel) 257–261
Selective association of phospholipids as a clue for the passive flip-flop diffusion through bilayer lipid membranes
L. Movileanu, D. Popescu, G. Victor, G. Turcu (Romania) 263–275

Book review 277–279
Author index 281
Subject index 283–286
Volume contents 287–288